

THE MINERAL INDUSTRY OF

HUNGARY

By Walter G. Steblez

In 1997, Hungary continued to produce modest amounts of fossil fuels, industrial minerals, and metals. Bauxite was the only major nonfuel mineral produced in Hungary that was significant in terms of European mineral production. The country's production of primary aluminum, compared with output levels in the 1980's, had been reduced substantially owing to energy shortages. Coal, natural gas, and petroleum production was sufficient to satisfy only about one-half of the country's annual energy needs. Hungary had all but completed the transition to a market economy, which involved major structural economic changes. These changes, which took place mostly between 1991 and 1994, included the denationalization of state-owned enterprises in the industrial, agricultural, and service sectors and the severance of state subsidies to these sectors. The country's economic performance continued to show overall improvement, given the economy's dislocations and production downturns that took place in the early stages of transition to a market economy system from 1990 to 1993. Compared with those of 1996, Hungary's gross domestic product and industrial production in 1997 grew by 4.4% and 7%, respectively. In terms of physical units, the output of metals showed production declines for alumina, bauxite, crude steel, and manganese levels compared with respective output levels in 1996 and 1995 but showed an increase in the production of secondary aluminum metal. The output of mineral fuels was stable, with the exception of crude petroleum and natural gas, which declined by about 8% and 5%, respectively, compared with that of 1996. (*See table 1.*)

The Government of Hungary based its regulatory policies for mining and geological exploration and survey work on provisions in the Mining Law of 1993 (Act XLVIII). Section 50 of the Mining Law was the basis for Governmental Decree No. 132/1993, which, in turn, comprised the legislative basis for the Hungarian Geological Survey. The Mining Law and related decrees and codes established the legislative bases for estimating

reserves, determining environmental risks associated with mining, and providing the geologic and technical information needed to outline tender conditions.

Government agencies that were responsible for enforcing existing environmental protection laws and regulations included the Ministry of the Environment and Regional Planning (KTM) and the Hungarian Mining Office (MBH). KTM was authorized to help only in the enforcement of existing environmental legislation prescribed by other ministries of the Government; however, with respect to mining and minerals, Hungary's Ministry of Industry and Commerce had the primary responsibility for establishing environmental regulatory standards. The chief responsibility of MBH was to review and certify the technical developmental and operational plans; these plans were required to include provisions pertaining to environmental protection and land restoration by responsible entities.

From 1993 to 1997, Hungary's mineral-commodity production trends showed increasing correspondence to market demands as opposed to those of central economic planning norms, which were required before 1990. Table 2 lists the names of the major operating companies in Hungary's minerals industry and provides their general location.

Following the decision by the Government to denationalize heavy industry enterprises, the process of privatization began to make headway in such large segments of Hungary's minerals industry as bauxite mining, alumina refining, and the mining and processing of industrial minerals. Major mineral industry activities in 1997 included a sale offer of the Ajka alumina refinery by the state-owned parent company, Hungarian Aluminum Industrial Corporation (HUNGALU); the awarding of gold exploration concessions to domestic and European Union companies; and continuing efforts to restart mining operations at the Lahoca gold-copper deposit. A full report on Hungary's minerals industry again will be presented for the year 1999.

TABLE 1
HUNGARY: PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Commodity 2/ METALS	1993	1994	1995	1996	1997
Aluminum:					
Bauxite, gross weight thousand tons	1,561	836	1,015	1,056 r/	743
Alumina, gross weight, calcined basis do.	421	177	184	208	76
Metal:					
Primary	27,879	30,740	25,000	30,000 r/	35,000
Secondary e/	25,000	3,000	4,000	63,808 r/ 3/	63,190 3/
Total	52,879	33,740	29,000	93,808 r/	98,190
Copper, metal: e/					
Smelter, secondary	100	100	100	100	100
Refined including secondary	11,000	11,000	11,000	11,000	12,000 3/
Gallium, mine output metal content kilograms	7,000	5,577	4,187	5,000	--
Iron and steel, metal:					
Pig iron thousand tons	1,407	1,590	1,515	1,548 r/	1,190
Ferroalloys e/ 4/	8,500	8,000	8,000	8,000	8,000
Steel:					
Crude thousand tons	1,752	1,945	1,865	1,903 r/	1,689
Semimanufactures, rolled only do.	1,835	2,074	2,117	2,133	2,229
Manganese ore:					
Run of mine:					
Gross weight	38,000	40,000	37,000	65,000 r/	57,000
Mn content e/	9,200	13,000	9,600	15,700 r/	14,000
Concentrate:					
Gross weight	59,000	25,000	25,000 e/	33,813 r/	15,291
Mn content e/	17,500	7,500	7,500	11,000	5,000
Uranium, U3O8 content	499	503	277	250	200
Zinc, metal, smelter, secondary e/	1,000	-- 3/	--	--	--
INDUSTRIAL MINERALS					
Cement, hydraulic thousand tons	2,530	2,810	2,875	2,747 r/	2,811
Clays:					
Bentonite:					
Raw	9,404	14,700	22,792	15,376	14,848
Processed e/	8,000	12,000 3/	12,000	9,000	9,000
Kaolin, raw and washed	15,000	15,000	10,959	9,854	10,000
Gypsum and anhydrite	125,000	151,000	198,000	190,000 e/	190,000 e/
Lime, calcined thousand tons	476	464	538	468 r/	498
Nitrogen, N content of ammonia e/ do.	237 3/	250	250	250	250
Perlite	80,000	85,000	151,000	110,000 r/	120,000
Refractory materials, n.e.s.:					
Chamotte products thousand tons	20	20	19	20 e/	20 e/
Chrome magnesite products do.	3	5	4	5 e/	5 e/
Sand and gravel:					
Gravel do.	8,000 e/	8,103	10,906	11,000 r/ e/	10,000 e/
Sand:					
Common thousand cubic meters	200 e/	104	206	275	284
Foundry thousand tons	15	12	159	9	73
Glass do.	260	308	523	325	328
Sodium compounds:					
Hydroxide (caustic soda)	130,000	132,000	159,215	160,167	150,000
Sulfate	6,000 e/	--	--	--	--
Stone:					
Dimension, all types thousand tons	4,030	5,206	4,967	5,000 e/	5,000 e/
Dolomite do.	644	933	1,001	582	1,440
Limestone do.	3,920	4,273	4,340	4,949 r/	4,941
Sulfur: e/					
From pyrite	800	--	--	--	--
Byproduct, elemental, all sources	8,000	30,890 3/	28,802 3/	28,000	30,000
Total	8,800	30,890 3/	28,802 3/	28,000	30,000
Sulfuric acid	71,300	83,700	106,737	89,712 r/	84,463
Talc	1,800	1,500 e/	1,150	1,200 e/	500

See footnotes at end of table.

TABLE 1--Continued
HUNGARY: PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Commodity 2/	1993	1994	1995	1996	1997
MINERAL FUELS AND RELATED MATERIALS					
Coal:					
Bituminous	942	1,024	844	962	924
thousand tons					
Brown	6,600	5,710	6,458	6,538 r/	6,552
do.					
Lignite	5,050	6,760	7,151	7,575	8,089
do.					
Total	12,592	13,494	14,453	15,075 r/	15,565
do.					
Coke, metallurgical e/	643 3/	650 3/	650	650	650
Fuel briquets	605	410	362	323 r/	214
thousand tons					
Gas, natural, marketed	5,010	5,900	5,451	4,756 r/	4,513
million cubic meters					
Peat, agricultural use e/	65	65	48 3/	45 r/	50
thousand tons					
Petroleum:					
Crude:					
As reported	1,710	1,600	1,669	1,477	1,355
do.					
Converted	11,400	10,700	10,800	9,800 e/	9,100 e/
thousand 42-gallon barrels					
Refinery products 5/	41,200	41,000	41,000	40,000 e/	40,000 e/
do.					

e/ Estimated. r/ Revised.

1/ Table includes data available through April 1999.

2/ In addition to the commodities listed, diatomite and a variety of other crude construction materials, such as common clays, are produced, but available information is inadequate to make reliable estimates of output levels.

3/ Reported figure.

4/ Hungary is believed to produce some blast furnace ferromanganese.

5/ Excludes refinery fuel and losses.

TABLE 2
HUNGARY: STRUCTURE OF THE MINERAL INDUSTRY IN 1997

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies	Location of main facilities	Annual capacity
Alumina	Hungarian Aluminum Industrial Corp. (HUNGALU)	Ajka Timfoldgyar plant, about 120 kilometers southwest of Budapest, near Lake Balaton	400
Do.	do.	Almasfuzito Timfoldgyar plant near the Czech Republic border, 63 kilometers northwest of Budapest	240
Do.	do.	Moson-Magyarovar plant, in northwestern corner of Hungary, about 12 kilometers from Austrian and Czechoslovak borders	30
Aluminum, primary	do.	Inota plant, near Varpalota, 75 kilometers southwest of Budapest	46
Bauxite	HUNGALU: Bakony Mining Enterprise	Bakony District, extending roughly 100 kilometers northeast along Lake Balaton	1,500
Cement	Belpafatvalvi Cement es Meszipari Rt Principal investors: Heidelberger & Schwenk (Germany) and Hungarian Group	Belapatfalva, near Miskolc, 125 kilometers northeast of Budapest	1,100
Do.	Beremend Cement es Meszipari Rt Principal Investors: 100%-owned by Heidelberger & Schwenk (Germany)	Beremend, 45 kilometers south of Pecs	1,090
Do.	Dunai Cement es Meszmu Kft Principal Investors: 100%-owned by Heidelberger & Schwenk (Germany)	Vac, 50 kilometers north of Budapest	1,200
Do.	Hejocsabai Cement es Meszipari Rt Principal Investors: Holderbank (Germany) & Hungarian Group	Hejoscaba, 150 kilometers northeast of Budapest	1,450
Do.	Labatlani Cementipari kft Principal Investors: 100%-owned by Holderbank (Germany)	Labatlan, 20 kilometers north of Tatabanya	550
Clays	Agyag-Asvany Kft Principal Investors: Navan Resources PLC (Ireland)	Felsopeteny, one underground and two open-pit mines and 5,000- tons- per year processing plant. Products: ball clay, kaolin, and refractory clay	35
Coal:			
Bituminous and lignite	Magyar Szenbanyaszati Troszt (MSZT) (Hungarian Coal Mining Trust)	Tatabanya and Oroszlany coal mining region, 45 kilometers west of Budapest	8,900
Do.	do.	Mecsek coal mining region, near Pecs and Komlo, north of the Yugoslav border	3,100
Do.	do.	Borsod coal mining region, 130 kilometers northeast of Budapest	5,200
Lignite	do.	Thorez opencast mine at Visonta, 80 kilometers northeast of Budapest	7,000
Manganese	Orszagos Erc-es Asvanybanyak (National Ore and Mineral Mines)	Urkut manganese ore mines, 120 kilometers southwest of Budapest	160
Natural gas	million cubic feet Hungarian Oil and Gas Co. (MOL)	Szeged and Algyo gasfields, southern Hungary	152,000
Do.	do.	Hajduszoboszo gasfields, 180 kilometers east of Budapest	50,000
Do.	do.	Smaller gasfields- Szank, Kardoskut, Bekes, Berefurdo, and others	39,000
Perlite	Perlit 92 Kft Principal Investors: Navan Resources PLC (Ireland) and Hungarian Group	Palhaza, northeastern Hungary. Open-pit mine and processing plant	150

TABLE 2-- Continued
HUNGARY: STRUCTURE OF THE MINERAL INDUSTRY IN 1997

(Thousand of metric tons unless otherwise specified)

Commodity		Major operating companies	Location of main facilities	Annual capacity
Petroleum:				
Crude	million barrels	Hungarian Oil and Gas Co. (MOL)	Szeged-Algyo field, near Romanian-Yugoslav border; 50% of total capacity	7
Refined:		Subsidiaries of MOL:		
Do.	do.	Danube Petroleum Refining Co.	Szazhalombatta	55
Do.	do.	Tisza Petroleum Refining Co.	Leninaváros	22
Do.	do.	Zala Petroleum Refining Co.	Zalaegerszeg	4
Silica		Uveg-Asvany Kft Principal Investors: Navan Resources PLC (Ireland) and Hungarian Group	Mine and plant at Fehevarosgo	660
Steel		Dunaferr Dunai Vasmu Rt	60 kilometers south of Budapest	1,400
Do.		OAM-Ozdi Acelmuevek Kft	120 kilometers northeast of Budapest	360
Do.		DNM-Diosgyori Acelmuevek es Kereskedelmi Kft	Diosgyoer, 145 kilometers northeast of Budapest	850